IN THE CLAIMS:

Claims 1-7 have been cancelled. Please enter new claims 8-29 into the application. All of the pending claims 1-29 are presented below. This listing of claims will replace all prior versions and listings of claims in the application.

1.-7 (cancelled)

8. (new) A process for preparing 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4-dien -3-one, characterized in that it comprises contacting vanillin and acetone under ultrasonic irradiation.

9.(new) A process according to claim 8, characterized in that vanillin and acetone are contacted in a mole ratio of 2:1.

10. (new) A process according to claim 8, characterized in that vanillin and acetone are contacted at temperatures ranging from 25°C to 60°C.

11. (new) A process according to claim 8, characterized in that the ultrasonic irradiation is in the range of from 25 to 40 KHz.

12. (new) A process according to claim 8, characterized in that vanillin and acetone remain in contact for a period of time ranging from 1 to 3 hours.

13. (new) A process according to claim 8, characterized in that it additionally comprises purifying the purification of 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4-dien -3-one obtained, mixing the reaction mixture in water/ice until a crude product is obtained, then dissolved in a sodium or potassium hydroxide solution and filtered; the filtrate being treated with hydrochloric sulfuric acid and additional filtration, successive washes with water being then carried out until a neutral pH is achieved.

14. (new) A process according to claim 13, characterized in that the sodium or potassium hydroxide solution is at a concentration between 10% and 30%.

15. (new) A process according to claim 13, characterized in that the hydrochloric or sulfuric acid is at a concentration between 10% and 30%.

16. (new) A process for preparing 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4-dien -3-one, characterized in that it comprises mixing vanillin and acetone in an acidic medium.

17. (new) A process according to claim 9, characterized in that it additionally comprises purifying 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4-dien-3-one obtained, putting the reaction mixture into water/ice until the crude product is formed, then dissolved in a sodium or potassium hydroxide solution and filtered; the filtrate is then treated with hydrochloric or sulfuric solution and additionally filtered, successive washes with water being carried out subsequently until a neutral pH is achieved.

18. (new) A process for preparing 1,5-bis(3-methoxy-4-acethoxy-phenyl)-penta-1,4-dien -3-one, characterized in that it comprises mixing 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4 -dien-3-one, obtainable by the process defined in claim 1, and acetic anhydride and sodium acetate.

19. (new) A process of preparing 1,5-bis(3-methoxy-4-acethoxyphenyl)-penta-1,4-dien -3-one, characterized in that it comprises mixing 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4 -dien-3-one, obtainable by the process as defined in claim 1, in dimethylformamide and potassium carbonate, and then adding 3-methyl-but-2-enyl bromide.

20. (new) A process according to claim 17, characterized in that 3-methyl-but-2-enyl

bromide is added to the mixture of 1,5-bis(4-hydroxy-3-methoxyphenyl) -penta-1,4-dien-3-one.

21. (new) A process according to claim 20, characterized in that it additionally comprises purifying 1,5-bis[3-methoxy-4-(3-methyl-but-2-enyloxy)-phenyl]-penta-1,4-dien-3-one, putting said compound into water with ice, then extracting with chloroform, the washing the organic phase with NaHSO4 and then water; wherein the chloroform phase is dried with anhydrous sodium sulfate, and then the solvent is filtered and rotoevaporated, and then the product is passed through a chromatographic column filled with silica gel.

22. (new) A process of preparing 1,5-bis(3,4-dimetoxy-henyl)-penta1,4-dien-3-one, characterized in that it comprises mixing 3,4-dimethoxybenzoaldehide and acetone in an ultrasound bath.

23. (new) A process of preparing 1,5-bis(4-hydroxy-3-methoxyphenyl)-penta-1,4-dien -3-one, characterized in that 3,4-dimethoxybenzoaldehide and acetone are mixed in a ratio of 2:1.

24. (new) A process according to claim 22, characterized in that it additionally comprises purifying the 1,5-bis(3-,4-dimethoxy-phenyl)- penta-1,4-dien-3-one obtained, putting water with ice, filtering the precipitate, washing it with water, wherein the water phase is extracted with chloroform and the chloroform phase is dried with anhydrous sodium sulfate, filtered and rotoevaporated.

25. (new) A process of preparing 1,5-bis(3-,4-dimethoxy-phenyl)-penta-1,4-dien-3-one, characterized in that it comprises mixing 1,4-dien-3-on3, obtainable by the processes as defined in claim 1, with dimethyl sulfate of methyl iodide.

26. (new) A process according to claim 25, characterized in that it additionally

comprises purifying 1,5-bis(3,4-dimethoxy-phenyl)-penta-1,4-dien-3-one in ice-cold water, the formed precipitate is filtered, and then neutralized with HCl; then the product is washed with water until a neutral pH is achieved.

27. (new) A process of preparing 1,5-bis(4-hydroxy-3-methoxy-phenyl)-penta-1,4-dien-3 -iliden-malonitryl, characterized in that it comprises mixing 1,5-bis(4-hydroxy-3-methoxy -phenyl)-penta-1,4-dien-3-one, obtainable by the processes as defined in claim 1 and malonitryl.

28. (new) Use of compounds obtainable by the processes as defined in claim 1, characterized in that it is for preparing a pharmaceutical composition for the treatment of cancer.

29. (new) A therapeutic method for the treatment of cancer, characterized in that one administers a therapeutically effective amount of a compound obtainable by the process as defined in claim 1 to a subject in need of such a treatment.